IN THE CLAIMS:

Kindly cancel claims 2 and 4 without prejudice.

Kindly amend claims 1, 3 and 23 so that they read as follows. A marked-up version of the amended claims is attached hereto.

1. (Amended) Apparatus for removing particles from the surface of a substrate, comprising:

a moving chuck, which is configured to receive the substrate and to move the substrate within a processing chamber;

a particle localization unit, which is adapted to scan the surface as the substrate is moved by the chuck in the processing chamber, in order to determine locations of particles on the surface; and

an optical arm, which is adapted to direct a beam of electromagnetic energy onto the surface of the substrate while the substrate is mounted on the chuck within the processing chamber, causing the particles to be dislodged from the surface, wherein the chuck is operative to position the substrate relative to the optical arm so as to cause the beam to impinge upon the locations of the particles on the surface that are determined by the particle localization unit.

3. (Amended) Apparatus according to claim 1, wherein the optical arm is adapted to rotate about a base thereof so as to scan the beam according to the particle locations.

23. (Amended) A cluster tool for processing a semiconductor wafer, comprising:

a processing chamber, adapted to receive the wafer and comprising apparatus for forming microcircuit features on the wafer;

a particle removal unit, adapted to receive the wafer and comprising an optical assembly for directing a beam of electromagnetic energy onto a surface of the wafer so as to dislodge contaminants from the surface; and

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a wafer transfer mechanism, coupled to transfer the wafer between the processing chamber and the particle removal unit substantially without exposing the wafer to ambient air.